

PATENT  
Docket No. ST03004USU (172-US-U1)  
Serial No.: 10/633,488

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### Remarks

Claims 2-31 and 34 are pending in the present application. Claims 1, 32 and 33 were previously canceled without prejudice. Claims 2-31 and 34 stand rejected. In this paper, Applicant has amended claim 2 to correct a minor typographical error, and has added new claims 35-44. Applicant believes that no new matter has been added by the amendments to the claims.

### Claim Rejection – 35 U.S.C. § 112

Claim 7 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. The Examiner contends that it is not clear what all is meant and encompassed by “maximum” as recited in claim 7. Applicant respectfully traverses this rejection. Applicant refers the Examiner to page 9, para. 27, and page 19, para. 89 of the specification. Applicant respectfully submits that claim 7 is definite because (1) the meaning of “maximum” is adequately supported by of the specification, and (2) a value for this “maximum,” as utilized in accordance with the teachings of the specification, may be readily determined by a person of ordinary skill in the art. Therefore, Applicant respectfully requests that the rejection be withdrawn.

### Claim Rejection – 35 U.S.C. § 103

Claims 2-9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ptasinski et al. (non-patent publication) in view of Hancock (U.S. Patent No. 6,202,023). The Examiner states that “Ptasinski . . . was not quite clear about a polynomial surface fit over a grid of points.” However, the Examiner contends that “Hancock teaches a two dimensional polynomial surface

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fit over a grid of points.” Applicant respectfully traverses this rejection for the reasons set forth below.

First, independent claim 2 does not recite just any type of “grid of points.” The recited “grid of points” is utilized as part of determining a location that involves altitude aiding based on digital terrain elevation data. Claim 2 recites “a horizontal error ellipse parameter in the altitude equation that forms an error ellipse having a major axis and a minor axis that corresponds to the altitude error,” and “a plurality of points along the major axis and the minor axis that form a grid of grid points.” As pointed out by Applicant previously in the prosecution of this application, the only possible use of polynomial-based fitting in Ptasinski et al. relates to a situation in which a receiver is able to track more than four satellites. See Ptasinski et al., p. 454 (“Altitude aiding can be also used when a receiver tracks more than 4 satellites. . . . The most common method to solve an over-determined set of equations is least squares”); p. 456 (“If the total number of equations is greater than four, then scale the altitude equation in order to calculate a least square solution with an over-determined set of equations”).

Second, Hancock clearly fails to remedy the deficiencies of Ptasinski et al. Applicant respectfully disagrees with the Examiner’s contention that “Hancock teaches a two dimensional polynomial surface fit over a grid of points.” Applicant cannot find any teaching in Hancock relating to either polynomial surface fitting or the use of terrain or elevation data. Moreover, Hancock is not directed to a satellite positioning system.

Specifically, Hancock is directed to a system for automatically providing services over a computer network for users in a mobile environment. Hancock expressly distinguishes its teaching from GPS-based systems and other systems. See Hancock, cols. 1 & 2. Hancock teaches a “geographical referencing system” that assigns locational addresses (termed “ULAs” or “PLAs”) to points of interest (POIs) arbitrarily and separately from any existing global

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referencing system. *See* Hancock, col. 5, lines 53-61. Hancock purports to create its own addressing/location identifying system, including a grid system illustrated in Figs. 1 & 2 of Hancock. *See generally* Hancock, cols. 5-10. Hancock states that its grid addresses can be translated to latitude and longitude coordinates, but Hancock's addressing/location identifying system and the grid employed by the system are clearly separate and different from latitude/longitude-based coordinate systems. *See, e.g.* Hancock, col. 6, lines 35-44; col. 10, lines 48-65.

Thus, even if Hancock had taught "a two dimensional polynomial surface fit over a grid of points," such grid is clearly not the grid to which claim 2 is directed. Therefore, Applicant respectfully submits that Hancock provides no teaching, suggestion or motivation for applying "a two-dimensional polynomial surface fit over the grid points" in a "satellite positioning receiver" as recited in claim 2.

Claims 3-9 depend directly or indirectly from claim 2, and therefore are distinguishable over Ptasinski et al. for the same reasons as set forth above with regard to claim 2.

In view of the foregoing, Applicant respectfully submits that claims 2-9 are patentable under 35 U.S.C. § 103(a) over the combination of Ptasinski et al. and Hancock, and therefore respectfully requests that this rejection be withdrawn.

#### **Claim Rejections – 35 U.S.C. § 102**

Claims 10-31 and 34 are rejected under 35 U.S.C. § 102(b) as being anticipated by Ptasinski et al.. Applicant respectfully traverses this rejection for the reasons set forth below.

As an initial matter, independent claims 10, 18 and 25 recite "fitting a two-dimensional polynomial to the corresponding horizontal error ellipse," and independent claim 34 recites "a two-dimensional polynomial surface fit over the grid points." Claims 10, 18, 25 and 34 are

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therefore distinguishable over Ptasinski et al. for the same reasons as set forth above with regard to claim 2. Moreover, in conjunction with the rejection of claim 2, the Examiner stated that "Ptasinski . . . was not quite clear about a polynomial surface fit over a grid of points." Therefore, Applicant respectfully submits that none of claims 10, 18, 25 and 34 reads on Ptasinski et al.

Claims 11-17 depend directly or indirectly from claim 10, and therefore are distinguishable over Ptasinski et al. for the same reasons as set forth above with regard to claim 10. Claims 19-24 depend directly or indirectly from claim 18, and therefore are distinguishable over Ptasinski et al. for the same reasons as set forth above with regard to claim 18. Claims 26-31 depend directly or indirectly from claim 25, and therefore are distinguishable over Ptasinski et al. for the same reasons as set forth above with regard to claim 25.

In view of the foregoing, Applicant respectfully submits that claims 10-31 and 34 are patentable under 35 U.S.C. § 102(b) over Ptasinski et al., and therefore respectfully requests that this rejection be withdrawn.

#### New Claims

Applicant has added new claims 35-44, which are supported at page 8, para. 24 of the specification. Accordingly, new claims 35-44 do not add new matter. New claims 35-44 are dependent claims, and therefore are distinguishable over the prior art of record for at least the same reasons as regards their respective independent claims as well as the features they add. Accordingly, Applicant respectfully requests that new claims 35-44 be entered and allowed.

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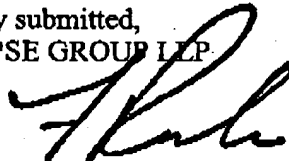
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### Conclusion

In light of the above remarks, it is respectfully submitted that the present application is now in proper condition for allowance, and an early notice to such effect is earnestly solicited.

If any small matter should remain outstanding after the Patent Examiner has had an opportunity to review the above Remarks, the Patent Examiner is respectfully requested to telephone the undersigned patent attorney in order to resolve these matters and avoid the issuance of another Office Action.

Respectfully submitted,  
THE ECLIPSE GROUP LLP



Date: February 12, 2007

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